U.S. - MEXICO BORDER
FIELD COORDINATING COMMITTEE

The purpose of the Department of the Interior (DOI) U.S.-Mexico Border Field Coordinating Committee (FCC) Newsletter is to communicate relevant developments and other information that may be useful as we manage, protect, inventory, and monitor natural and cultural resources along our international border with Mexico.

Buenos Aires National Wildlife Refuge: Partnership with the Border Patrol

Bonnie Swarbrick, Buenos Aires NWR

An effective working relationship with the U.S. Border Patrol allows Buenos Aires National Wildlife Refuge (BANWR) to manage public lands and our wildlife legacy in the face of daunting challenges. The Refuge confronts an array of obstacles in land and wildlife management which are not found on most wildlife refuges. Located along the southern Arizona international border near Sasabe, this former ranch is now managed by the U.S. Fish and Wildlife Service. The Refuge encompasses 118,000 acres, mostly semi-desert grassland with smaller areas of seasonal wetlands. As part of the National Wildlife Refuge System, BANWR is charged with a mission to preserve native wildlife and their habitat. Due to its border location, however, the Refuge faces immense obstacles in fulfilling that mission.

These problems are surmountable, thanks to the valuable cooperation between the U. S. Border Patrol (USBP) and BANWR. Through a Memorandum of Understanding, the two agencies work together to achieve mutual goals. Refuge manager Mitch Ellis has forged an excellent working relationship with the Border Patrol in an effort to effectively manage land and wildlife while at the same time protecting our country's security.

Wildlands management at BANWR is impacted by a barrage of obstacles. Illegal immigrants leave about 500 tons of trash on the refuge each year. More than 100 abandoned vehicles need to be towed annually due to border activity. Over 1,300 miles of illegal trails crisscross the landscape. Immigrants denude land with their trails and unauthorized roads. They leave human waste and toilet paper and create a disturbance to wildlife. When fences are cut and gates are left open, livestock enter the refuge, creating impacts to wildlife and a risk of disease. Several wildfires are started each year by illegal border crossers.

Border issues divert valuable personnel and fiscal resources at the refuge and consume the majority of working hours for refuge law enforcement officers.

To tackle these problems, cooperative work between the Refuge and USBP takes many forms. The USBP and the National Guard used the refuge maintenance yard as a construction site for a vehicle barrier placed along the Refuge's 5.5-mile border with Mexico. BANWR permits the USBP to maintain a horse patrol facility on Refuge land. This produces more efficient patrolling and is more environmentally sensitive than alternative patrol methods. The Department of Homeland Security (DHS) uses BANWR's airstrip for landing and refueling.

USBP Public Lands Liaison Agents, work directly with the BANWR manager on border security issues.

Six rescue beacons are located on the Refuge through cooperation with DHS, providing emergency contact for immigrants in distress. Several surveillance towers were recently erected on the Refuge as part of SBInet Project 28, a cooperative effort with DHS and Boeing. Sensors and cameras are designed to detect illegal entries and to send surveillance information to USBP agent vehicles.

The Refuge and DHS are combining their law enforcement offices in one facility at the border town of Sasabe, Arizona. The result is increased

communication and coordination. Refuge law enforcement officers work closely with DHS agents providing orientations, exchanging intelligence, detaining illegal border crossers, providing backup to DHS officers, towing vehicles, and supporting other actions.

Through cooperation, a vehicle barrier was built in 2007 to reduce impacts to the Refuge.

Cooperation and communication helps to make the USBP more efficient and creates an understanding of Refuge needs and environmental concerns. Refuge staff recently completed the text for a video to be used by USBP in agent training. The video will help DHS agents to accomplish their work with an awareness of the refuge goals and the sensitivity of the landscape and its plants and animals.

The cooperation between BANWR and the USBP is an effective and impressive partnership. Refuge manager Mitch Ellis credits this effort as a powerful force in tackling environmental issues while minimizing impacts to public land and wildlife. Tight budgets and heavy workloads are typical for refuges. Buenos Aires has the additional load of border issues and their multiple impacts. A productive and efficient working relationship with Border Patrol provides valuable help for the refuge in meeting the many challenges of its conservation mission.

U.S.-Mexico Border Mapping Update

Contact Jean Parcher, U.S. Geological Survey for more information on mapping: jwparcher@usgs.gov

Binational Geospatial Data Download Page:

The U.S. Geological Survey's U.S.-Mexico Border Environmental Health Initiative (BEHI) launched an Internet site to download U.S. and Mexican environmental datasets at (<http://borderhealth.cr.usgs.gov/datalayers.html>).

The BEHI initiative provides an integrated, Web-based, environmental resource geospatial database for display and analysis to monitor linkages between environmental health and quality of life issues in the border region. This multi-discipline initiative includes collaboration from U.S. and Mexican government agencies. The BEHI data download page, which can be reached via the main BEHI website at <http://borderhealth.cr.usgs.gov/> by clicking "Data Download" under the "Maps and Data" category, contains binationally integrated fundamental geospatial and environmental scientific datasets for the U.S.-Mexico border region at various scales, current status maps of data holdings, and direct links to the metadata files. The current fundamental datasets available for download include:

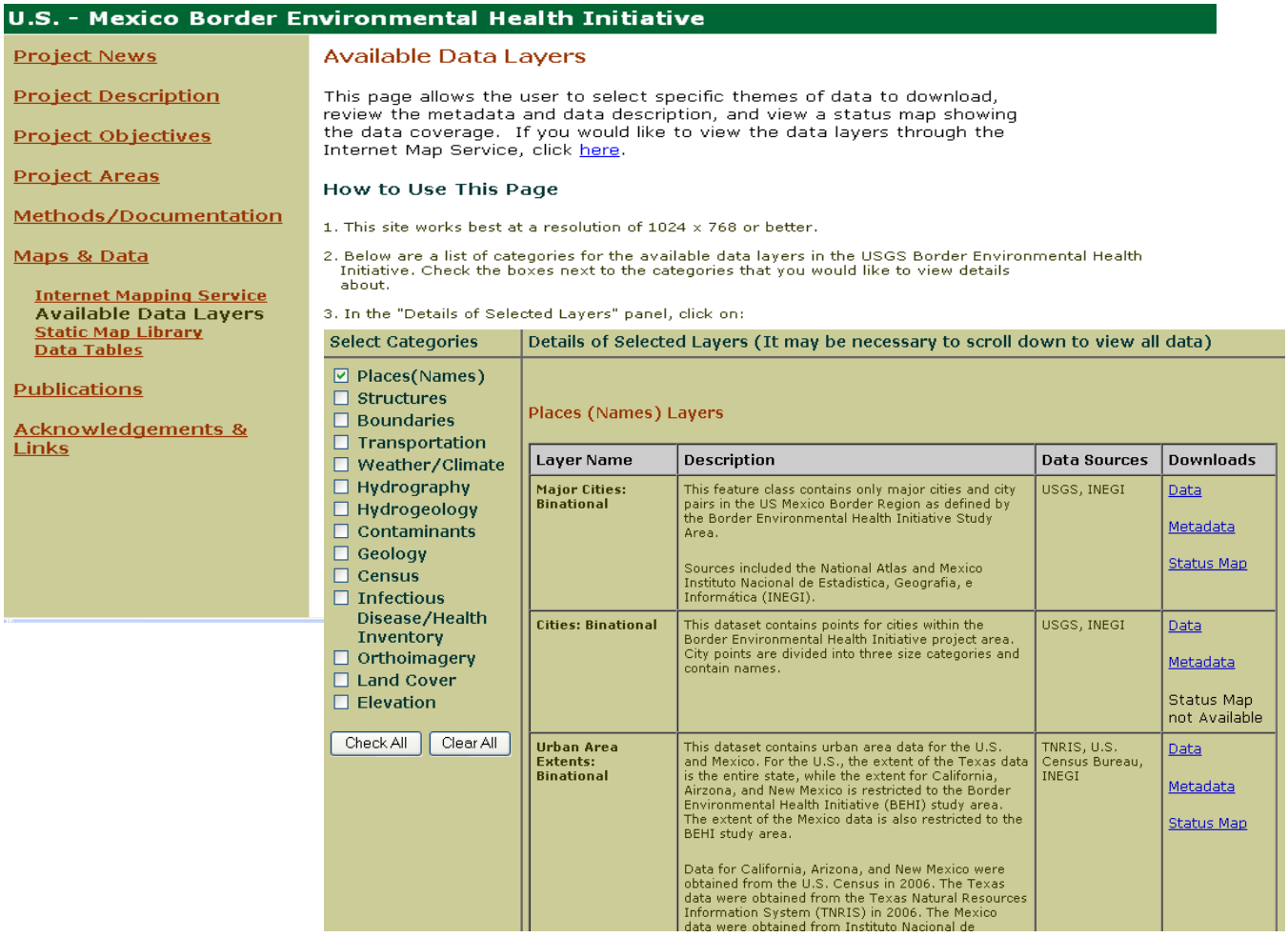
1. Major Cities
2. All cities
3. Urban areas
4. Colonias: Texas
5. Hospitals
6. Schools
7. Border Environmental Health Study Area
8. International boundary
9. Binational Land Use and Land Cover
10. Binational Geology: South Texas
11. Texas Aquifers

The larger scale binational datasets (1:24,000 and 1:50,000) will be available on the data download page once the Annex to the Memorandum of Understanding is signed by the USGS and the Instituto Nacional de Estadística, Geografía e Informática (INEGI),.

Other features of the data download page include Internet URL addresses and instructions for accessing digital orthophotos, digital elevation models, and the North American Atlas from the USGS and INEGI online data sources.

These databases are invaluable tools for monitoring the environmental response to anthropogenic and climate variability changes on the landscape.

Figure 1: (below) U.S.-Mexico Border Environmental Health data download webpage located at http://borderhealth.cr.usgs.gov/datalayers.htm



U.S. - Mexico Border Environmental Health Initiative

Project News
Project Description
Project Objectives
Project Areas
Methods/Documentation
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Available Data Layers

This page allows the user to select specific themes of data to download, review the metadata and data description, and view a status map showing the data coverage. If you would like to view the data layers through the Internet Map Service, click here.

How to Use This Page

1. This site works best at a resolution of 1024 x 768 or better.
2. Below are a list of categories for the available data layers in the USGS Border Environmental Health Initiative. Check the boxes next to the categories that you would like to view details about.
3. In the "Details of Selected Layers" panel, click on:

Select Categories

- [x] Places(Names)
- [ ] Structures
- [ ] Boundaries
- [ ] Transportation
- [ ] Weather/Climate
- [ ] Hydrography
- [ ] Hydrogeology
- [ ] Contaminants
- [ ] Geology
- [ ] Census
- [ ] Infectious Disease/Health Inventory
- [ ] Orthoimagery
- [ ] Land Cover
- [ ] Elevation

Check All | Clear All

Details of Selected Layers (It may be necessary to scroll down to view all data)

Places (Names) Layers

Layer Name	Description	Data Sources	Downloads
Major Cities: Binational	This feature class contains only major cities and city pairs in the US Mexico Border Region as defined by the Border Environmental Health Initiative Study Area. Sources included the National Atlas and Mexico Instituto Nacional de Estadistica, Geografia, e Informática (INEGI).	USGS, INEGI	Data, Metadata, Status Map
Cities: Binational	This dataset contains points for cities within the Border Environmental Health Initiative project area. City points are divided into three size categories and contain names.	USGS, INEGI	Data, Metadata, Status Map not Available
Urban Area Extents: Binational	This dataset contains urban area data for the U.S. and Mexico. For the U.S., the extent of the Texas data is the entire state, while the extent for California, Airzona, and New Mexico is restricted to the Border Environmental Health Initiative (BEHI) study area. The extent of the Mexico data is also restricted to the BEHI study area. Data for California, Arizona, and New Mexico were obtained from the U.S. Census in 2006. The Texas data were obtained from the Texas Natural Resources Information System (TNRIS) in 2006. The Mexico data were obtained from Instituto Nacional de	TNRIS, U.S. Census Bureau, INEGI	Data, Metadata, Status Map

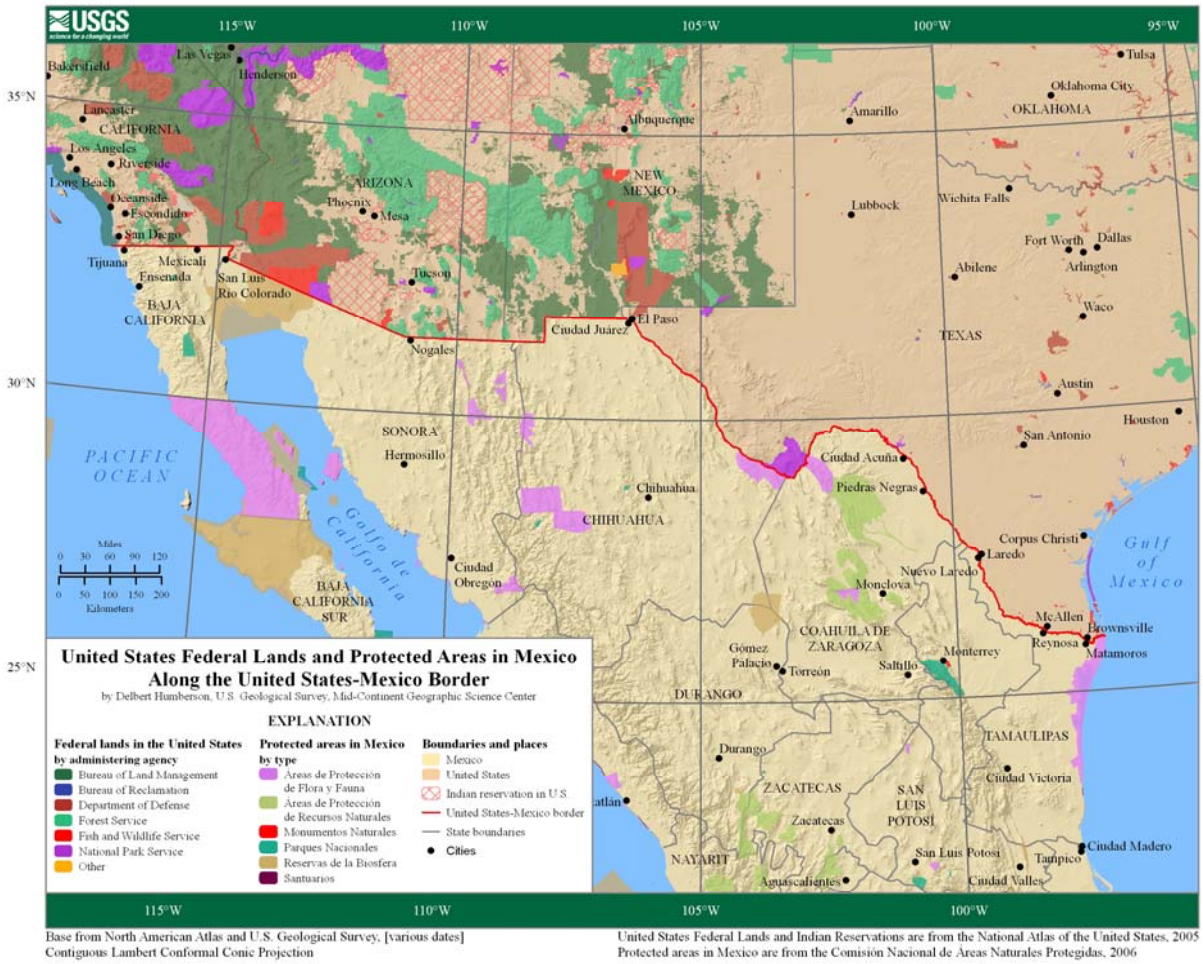

Figure 2: The USGS Border Environmental Health Initiative has a new map of the U.S. Federal Lands and Mexican Protected Areas for the border region. The National Atlas of the U.S. provided the 2005 source data for the U.S. Federal Lands and the Indian Reservations. The Comisión Nacional de Areas Naturales Protegidas provided the 2006 source data for the Mexican protected areas. The data and map will be available soon from the website at http://borderhealth.cr.usgs.gov Above is a preview of the map.

The Sonoran Joint Venture: Building Bridges for Bird Conservation

Jennie Duberstein, Education and Outreach Coordinator, Sonoran Joint Venture

The Sonoran Joint Venture (SJV) is a partnership of organizations and individuals that share a common commitment to the conservation of the unique birds and habitats of the southwestern United States and northwestern Mexico. Founded in 1999, the SJV works with partners in both the United States and Mexico to achieve on-the-ground bird and bird habitat conservation.

The SJV region includes southern Arizona, southern California, and the Mexican states of Sonora, Sinaloa, Baja California, and Baja California Sur, as well as the Gulf of California and its associated islands. The varied topography and distinctive climate of the region translate into an

array of desert, scrubland, riparian, forest, and freshwater and saltwater wetland habitats. This variety, in turn, supports extremely diverse bird life.

To date, 744 species of birds have been documented breeding in, wintering in, and/or migrating through the region. This is nearly two-thirds of all bird species that occur in northern Mexico, the United States, and Canada.

Because of the diversity of habitats and birds in the SJV region, birding ecotourism has arisen as a tool for economic diversification for some landowners in the area. The SJV and its partners are supporting projects that encourage rural landowners in Mexico to implement habitat protection and restoration projects on their property and then invite birders to enjoy outstanding opportunities to enjoy the scenery and birding in the resulting protected habitat.

One of the SJV's innovative offerings is the Bird Guide Training Workshop (*Taller de Capacitación de Guías de Aves*). The program is designed to teach basic skills to local residents in communities where SJV partners are working to use ecotourism as a conservation incentive. The workshop is a combination of time spent birding in the field and interactive classroom discussions. Participants learn basic bird biology, how to use a field guide, and how to identify birds.

They also learn important techniques for leading groups and get hands-on experience acting as guides during the workshop. Participants receive a copy of the Kaufman *Guía de Campo a las Aves de Norteamérica* (the Spanish-language version of the Kaufman Field Guide to the Birds of North America) and a binder full of accompanying materials to assist them when they return home and start to implement their own projects.

Approximately 30 people have participated in the two Bird Guide Training Workshops the SJV has offered to date (one in northern Sonora and one in Alamos, Sonora). Participants included fishers, ranchers, nature and adventure guides, and staff from Mexican conservation NGOs and agencies who hope to implement bird conservation outreach efforts in their communities. Because of the popularity of the workshops, several more are being planned for the coming year.

Although birding ecotourism is not a panacea for problems related to habitat loss or degradation in the region, it does provide a way for some landowners to gain additional income from their land for protecting birds and bird habitat. Used as one piece of an overall habitat protection and/or restoration effort, birding ecotourism has the potential to be one piece of a larger solution to the issues facing bird populations in the SJV region.

To learn more about the work of the Sonoran Joint Venture, please visit the website at http://www.sonoranjv.org.

Participants spend time birding in the field and learning how to use a field guide to identify birds.

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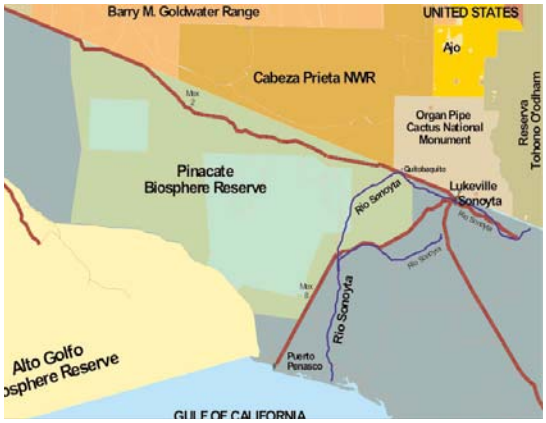
The Rio Sonoyta: Partnership Restoration Conservation

Arizona Ecological Services Tucson Office, U.S. Fish and Wildlife Service, has been working on a number of cross-border initiatives to conserve and recover listed and sensitive species of mutual concern to the U.S. and Mexico. For example, in

conjunction with many Mexican and U.S. partners we have been developing and implementing a community-based restoration and conservation plan for the Río Sonoyta in northwestern Sonora for the benefit of the community of Sonoyta and many species, including the rare Sonoyta mud turtle (*Kinonsternon sonoriense longifemorale*) and longfin dace (*Agosia chrysogaster*), and endangered Quitobaquito pupfish (*Cyprinodon eremus*).



The Río Sonoyta

The Río Sonoyta is a rare lowland desert stream and spring system (which includes Quitovac, Quitobaquito, and Río Sonoyta) which was formerly (100,000+ years ago) part of the Río Colorado drainage. Unfortunately, it faces numerous threats including drought, groundwater withdrawal, pollutants, trash, non-native invasive species, and unmet infrastructure needs (e.g., modern sewage treatment facilities).

The primary objectives of the conservation plan include: 1) maintaining and increasing native species diversity and abundance, 2) increasing community stewardship, 3) increasing opportunities for sustainable economic development and recreational use, and 4) improving hydrological function to maintain water quantity, improve water quality, and decrease human exposure to sewage and trash through development of a wastewater treatment facility compatible with the needs of native species.


The Agua Dulce reach of the Río Sonoyta (Photo by Phil Rosen)

Though some facets of the plan have yet to be fully developed and implemented, many have been accomplished. Recently, with funds obtained through a USFWS Preventing Extinction Grant Program, we created two ponds in Sonora, one at the Pinacate y Gran Desierto de Altar Biosphere Reserve headquarters and one at the Intercultural Center for the Study of Deserts and Oceans (CEDO) in Puerto Peñasco, which will serve as refuge populations for pupfish and longfin dace from the Rio Sonoyta. Populations of both are extremely rare and threatened.

The pupfish in the Río Sonoyta are recognized as a separate species, the Quitobaquito/Río Sonoyta pupfish, formerly considered a subspecies of the endangered desert pupfish. This pupfish only occurs at Quitobaquito Springs in Organ Pipe Cactus National Monument in Arizona and along a small reach of the Río Sonoyta in Sonora. Though no genetic studies have been conducted on the Río Sonoyta population of longfin dace, it likely differs significantly from other populations and could be a distinct taxon due to its isolation.

After pond construction, the team captured pupfish and longfin dace from Río Sonoyta and released them into the ponds this spring and summer. We also collected pupfish and dace from portions of the Río Sonoyta that were drying due to drought conditions, and released them in the spring system

at the Quitovac Indigenous Community. We plan to build one more pond in the town of Sonoyta. The ponds not only help us meet recovery tasks identified in the desert pupfish recovery plan, but will be used as tools to educate the public about the importance of conserving rare desert resources. Part of the grant money will be used to purchase educational panels to be displayed adjacent to the ponds.

Quitobaquito/Río Sonoyta pupfish

Longfin Dace

Multiple partners assisted with pond planning and construction, as well as fish transfer and river monitoring efforts, including: Pinacate and Gran Desierto de Altar Biosphere Reserve, Commission of Ecology and Sustainable Development of Sonora (CEDES), CEDO, Quitovac Indigenous Community, University of Arizona (UofA), University of Arizona Cooperative Extension, Arizona Game and Fish Department, Caldwell Design, Organ Pipe Cactus National Monument, and students from the Oregon State University Fish and Wildlife Club.

Representatives from the Quitovac Indigenous Community, Ecology Department of Puerto Peñasco, and the Pinacate Biosphere Reserve examining the pond at the Pinacate Headquarters (Photo by Erin Fernandez)

Biologists from Pinacate, CEDES, and UofA surveying Sonoyta mud turtles along the Río Sonoyta (Photo by Erin Fernandez)

Sonoyta mud turtle (photo by Jim Rorabaugh)

Eugenio Larios, Pinacate Biosphere Reserve, with children from the Quitovac Indigenous Community (Photo by Erin Fernandez)

The Board discussed a number of potential topics for its Twelfth Report. The shortlist will be presented to the Council on Environmental Quality (CEQ) later this summer and CEQ's response will be discussed at the next board meeting. The shortlist of five potential topics includes:

- Infrastructure, growth, funding, and determination of how the U.S.-Mexico border figures as a priority;
- Border environmental cooperation from La Paz forward;
- Innovative ways to reduce pollution through incentives;
- Tribal issues; and
- Sustainability.

The final Board meeting during calendar 2007 will take place in Las Cruces, New Mexico on October 3rd and 4th.

OTHER BORDER HIGHLIGHTS

Good Neighbor Environmental Board

http://www.epa.gov/ocem/gneb/

The Good Neighbor Environmental Board (GNEB) met in Brownsville, Texas July 23-25. The GNEB is an independent federal advisory committee with a mission is to advise the President and Congress of the United States on good neighbor practices along the U.S. border with Mexico. Presentations at the meeting provided input for the subject of the GNEB 11th report titled "Natural Hazards and the U.S.-Mexico Border Environment". This report examines how natural disasters affect the health and environment of communities in the U.S.-Mexico border region, and focus its recommendations on how the U.S. federal government can most effectively help enable these communities to manage them. Management, in this context, includes a natural hazards management cycle that has four components: preparation, response, recovery/rebuilding, and mitigation. Hurricanes and floods, wildfires, and earthquakes and mudslides are the specific disasters examined.

FCC ACTIVITIES

Next FCC Meeting: October 23-25, 2007 Albuquerque at the Drury Hotel

Please contact Diana Papoulias, FCC Chair, 573-876-1902, dpapoulias@usgs.gov; or contact Charlie Ault, FCC Vice-Chair, 505-248-6281, cault@fws.gov for more information.

If you would like to submit an article for the FCC Newsletter or to announce the availability of a publication or future meeting relevant to the U.S.-Mexico border region, please contact or send your contribution to Shela McFarlin (Tucson) at 520-624-0560, or Shela McFarlin@blm.gov